

AMENDMENTS TO THE CLAIMS

1. **(Previously Presented)** Photoactivatable water borne coating composition comprising
  - a) a (meth)acryloyl-functional polyurethane dispersion, wherein the (meth)acryloyl-functional polyurethane comprises 5 to 18 wt.% of alkylene oxide groups, based on the weight of the (meth)acryloyl-functional polyurethane, and the (meth)acryloyl functionality is in the range of 2 to 40, and
  - b) a UV-initiator.
2. **(Previously Presented)** Water borne coating composition according to claim 1, wherein the (meth)acryloyl-functional polyurethane comprises 8 to 18 wt.% of alkylene oxide groups, based on the weight of the (meth)acryloyl-functional polyurethane.
3. **(Original)** Water borne coating composition according to claim 1, wherein the coating composition comprises a reactive diluent.
4. **(Original)** Water borne coating composition according to claim 1, wherein the number average molecular weight of the (meth)acryloyl-functional polyurethane is in the range of 1,200 to 8,000.
5. **(Original)** Water borne coating composition according to claim 1, wherein the equivalent weight of the (meth)acryloyl-functional polyurethane is in the range of 200 to 4,000 g/eq on solid.
6. **(Previously Presented)** Water borne coating composition according to claim 1, wherein the (meth)acryloyl-functional polyurethane is obtained by reaction of:
  - a) at least one organic polyisocyanate,

- b) optionally, at least one organic compound containing at least two isocyanate-reactive groups and having a number average molecular weight in the range of 400 to 6,000,
- c) at least one isocyanate-reactive and/or isocyanate-functional compound bearing non-ionic dispersing groups,
- d) at least one isocyanate-reactive (meth)acryloyl-functional compound,
- e) optionally, at least one active hydrogen-containing chain extender, and
- f) optionally, at least one active hydrogen-containing compound bearing ionic groups.

7. **Cancelled.**

8. **Cancelled.**

9. **(Previously Presented)** Water borne coating composition according to claim 18, wherein the ratio of the free isocyanate groups to the isocyanate-reactive groups in the coating composition is 0.25-4:1.

10. **(Original)** Water borne coating composition according to claim 1, wherein the coating composition is a water borne clear coat.

11. **(Original)** Method of coating a substrate which comprises applying a water borne coating composition according to claim 1 to a substrate, causing or allowing the aqueous based carrier phase of the composition to be removed, and curing the surface of the film obtained with UV light.

12. **(Currently Amended)** Method of coating a substrate which comprises applying a water borne coating composition according to claim ~~7~~ 18 to a substrate, causing or allowing the aqueous based carrier phase of the composition to be removed, curing

the surface of the film obtained with UV light, and allowing the unexposed layers to cure thoroughly at room temperature or with heating.

13. **(Previously Presented)** Method of coating a metal substrate with a base coat composition and a clear coat composition, the clear coat comprising a (meth)acryloyl-functional polyurethane dispersion wherein the polyurethane has 8 to 18 wt.% of alkylene oxide groups, based on the weight of the (meth)acryloyl-functional polyurethane, and a UV-initiator.
14. **(Previously Presented)** Method of coating a flexible flooring with a clear coat composition, the clear coat composition comprising a (meth)acryloyl-functional polyurethane dispersion wherein the polyurethane has 5 to 18 wt.% of alkylene oxide groups, based on the weight of the (meth)acryloyl-functional polyurethane, and a UV-initiator.
15. **(Original)** Method according to claim 13, wherein the clear coat composition comprises a reactive diluent.
16. **(Previously Presented)** Water borne coating composition according to claim 18, wherein one or more of the isocyanate-reactive groups is a hydroxyl group.
17. **Cancelled.**
18. **(Currently Amended)** A photoactivatable water borne coating composition comprising  
a (meth)acryloyl-functional polyurethane dispersion wherein the (meth)acryloyl-functional polyurethane comprises 5 to 18 wt % of alkylene oxide groups, based on the weight of the (meth)acryloyl-functional polyurethane, and the (meth)acryloyl functionality is in the range of 2 to 40;  
an organic polyisocyanate; and  
~~at least one compound comprising isocyanate-reactive groups; and~~

a UV initiator;

wherein (1) either the coating composition further comprises at least one compound comprising isocyanate reactive groups or (2) the (meth)acryloyl-functional polyurethane comprises isocyanate reactive groups.

RESPONSE

In the present application, claims 1-6, 8-16 and 18 are pending and claims 1-6, 10, 11 and 13-15 have been allowed.

In the Office Action, claim 12 is rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Specifically, claim 12 was dependent upon a cancelled claim. Claim 12 is amended herein to depend upon pending claim 18.

Claims 9, 12, 16 and 18 are rejected under 35 USC 102(b), as being anticipated by CA 2269412. This rejection is respectfully traversed.

CA 2269412 relates to UV-curable aqueous coating compositions comprising (meth)acryloyl functional polyurethanes, optionally additional polyisocyanates, a UV initiator, and active hydrogen containing compounds. It teaches that the incorporation of urethane (meth)acrylates into aqueous binders may be facilitated by preparing the urethane (meth)acrylates from polyisocyanates which were rendered hydrophilic. Hydrophilic properties can be imparted anionically, cationically or non-ionically via internal or external emulsifiers such as polyethers (see page 6, lines 7 – 12). CA 2269412 thus describes six different ways to impart hydrophilic properties. The content of internal alkylene oxide (i.e. polyether) groups of the (meth)acryloyl functional polyurethane according to the present invention is neither mentioned nor suggested in CA 2269412.

Claim 18 has been amended herein to include all of the limitations of allowed claim 1. As such, claim 18 and its dependent claims 9, 12, and 16, are not anticipated by the cited art.

In the Office Action, claim 8 has been objected to as being dependent upon rejected base claim 18. Claim 8 is herein cancelled.

Applicants respectfully request reconsideration of the rejected claims and a finding that the claims are in condition for immediate allowance.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Michelle J. Burke". The signature is fluid and cursive, with the first name "Michelle" and last name "Burke" being clearly legible.

Michelle J. Burke

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